REMARKS

The Applicants have studied the Office Action dated October 18, 2004 and have made amendments to the claims to distinctly claim and particularly point out the subject matter which the Applicants regard as the invention. No new matter has been added. It is submitted that the application, as amended, is in condition for allowance. Claims 1, 2, 9, 10, 12, 18, 20, 23, and 25-28 have been amended, claims 31 and 32 have been cancelled without prejudice and new claims 33 and 34 have been added. By virtue of this amendment, claims 1-30 and 33-34 are pending. Reconsideration and allowance of the pending claims in view of the above amendments and the following remarks is respectfully requested.

Amendment to the Specification

The Applicants have amended the specification to provide an application serial number for a related U. S. Patent Application. No new matter has been added by this amendment.

Allowable Subject Matter

The Applicants wish to thank the Examiner for indicating that the subject matter of claims 12-16 would be allowable if rewritten in independent form. The Applicants have amended claim 12 to be in independent form by including all of the limitations of its base claim and all intervening claims. No new matter has been added by this amendment. The Applicants believe that the Examiner's objection to claims 12-16 has been overcome and that this objection should be withdrawn.

New Claims

The Applicants have added new dependent claims 33 and 34. New dependent claim 33 depends from claim 1 and specifies that "the first signal is only for indicating passage through the egress portal." Support for this claim language may be found in the specification at, for example, page 22, line 13 through page 23, line 20. See also FIGs. 3 and 4. No new matter has been added by this amendment.

The Applicants have further added new dependent claim 34, which depends from

dependent claim 2. New claim 34 specifies that "the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal substantially transmitted to an exterior side of the egress portal." Support for this claim may be found in the specification at, for example, page 20, lines 6-11. See also FIG. 10. No new matter has been added by this amendment.

Rejection under 35 U.S.C. §102(b) as being anticipated by *Kallio et al.*

The Examiner rejected claims 1-11, 18, 19, 25-29, 31 and 32 under 35 U.S.C. § 102(b) as being anticipated by *Kallio.* (hereinafter "Kallio"). The Examiner cites 35 U.S.C. § 102(b) and a proper rejection requires that a single reference teach (i.e., identically describe) each and every element of the rejected claims as being anticipated by Kallio.[1]

As an initial matter, the Applicants have cancelled claims 31 and 32 without prejudice, thereby rendering the rejection of those claims moot.

Exemplary embodiments of the present invention include mobile communications devices that operate in a WLAN mode, such as a wireless Internet 802.11(b) mode, and in a WAN mode, such as in an iDEN or GSM mode. The operations of these mobile communications devices determines when to change between the WLAN mode and the WAN mode based upon a determination that the mobile communications device is moving through an egress portal. The egress portals of the exemplary embodiments include an electronic device that emits a signal that is associated with indicating passage through the egress portal. Examples of these electronic devices and their signals include, but are not limited to, an infrared transmitter and/or an electronic security detection device.

To begin, the Kallio reference discloses a communications system that allows handoff

[1] See MPEP §2131 (Emphasis Added) "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim."

between a WLAN and a WAN. The operation of the system of Kallio determines when to handover a handset from WLAN-to-WAN communications

With regards to independent claims 1 and 25, Applicants have amended these independent claims to more clearly specify, for example as is specified by amended independent method claim 1, that the method includes "detecting a first signal from an electronic device that is located in proximity to an egress portal, the first signal associated with indicating passage through the egress portal." Independent claim 25 has been similarly amended. Support for this amendment may be found in the specification at, for example, page 22, line 8 through page 23, line 20. No new matter has been added by this amendment.

The Applicants have also amended these independent claims to clarify, for example as is specified by amended independent method claim 1, that the method includes "initiating, in response to detecting the first signal from the first electronic device, a registration sequence with a wireless communications system." Independent claim 25 has been similarly amended. Support for this amendment may be found in the specification at, for example, page 11, line 23, to page 12, line 1, and see also, for example, on page 22, lines 8-20. No new matter has been added by this amendment.

As noted above, the teachings of Kallio are limited to mobile devices that continually monitor transmissions from transmitters associated with communications systems and base decisions of whether to handover from one communications system, such as a WLAN, to another communications system, such as a WAN, based upon received signal strengths. See, for example, Kallio, Table following Paragraph 60. This is the exact problem identified with the prior art that was identified in the Applicants' specification and which the present invention is directed to solving. *See*, Specification, page 2, lines 18-22. As opposed to continually monitoring transmissions from both wireless communications systems, the exemplary embodiments of the present invention operate by "detecting a first signal from an electronic device that is located in proximity to an egress portal, the first signal associated with indicating passage through the egress portal," and by "initiating, in response to detecting the first signal from the

electronic device, a registration sequence with a wireless communication system. The handover in the operation of the present invention is initiated by "detecting a first signal from an electronic device that is located in proximity to an egress portal..." and not based upon concurrently comparing received signal strengths of the two communications system as is taught by Kallio.

Further, the operation of the presently claimed invention, which initiates a registration in response to detecting the first signal from the electronic device, where the first signal is associated with indicating passage through the egress portal, obviates a problem with the prior art systems of prematurely initiating the handover from one communications system to another. The presently claimed invention triggers this handover as the user is passing through the egress portal, and not simply in response to detecting that the user is near an egress portal. This characteristic of the present invention reduces "false handovers" that can occur as the user walks near an egress portal, but does not pass through the egress portal.

With regards to independent claim 18, The applicants have amended this claim to more clearly specify that "detecting a signal from an egress portal in response to detecting a triggering event, the signal associated with indicating passage through the egress portal" and that the method includes "scanning, in response to the detecting, for at least one wide area network listed in the available wide area network information." Support for these amendments is found in the specification at, for example, page 22, line 8 through page 23, line 20. No new matter has been added by this amendment. As discussed above with regards to amended independent claims 1 and 25, the prior art references of record fail to teach or suggest, when taken either alone or in combination with one another, "detecting a signal from an egress portal in response to detecting a triggering event, the signal associated with indicating passage through the egress portal." Since this element is not taught or suggested in the prior art, "scanning, in response to the detecting, ..." is further not taught or suggested in the prior art.

The Applicants have amended dependent claims 2 and 26 to more clearly specify, for example as is recited for amended dependent method claim 2, that the claimed method

further includes

> detecting a second signal from a second electronic device that is located in proximity to the egress portal; and
>
> determining, based upon an order of receiving the first signal and the second signal, that the wireless device is moving from a coverage area of a first wireless communication system to a coverage area of a second wireless communication system, wherein the step of initiating is performed in response to determining that the wireless device is moving from a coverage area of a first wireless communication system to a coverage area of a second wireless communication system

Support for theses amendments may be found in the specification at, for example, page 23, lines 5-11. No new matter has been added by this amendment. The applicants respectfully assert that the prior art references of record, either taken singly or in any combination, do not teach, anticipate, or suggest the combination of these claim elements as recited for amended claims 2 and 26, and for all dependent claims depending therefrom, respectively.

Applicants have further amended dependent claims 9 and 27 to recite that "the electronic device comprises at least one of a Bluetooth access point, an infrared transmitter and an electronic security detection device." Support for this amendment may be found in the specification at, for example, page 11, lines 20-22 and page 22, lines 8-12. No new matter has been added by this amendment. The Applicants respectfully assert that the teachings of Kallio and the other prior art references of record, taken singly or in any combination, do not teach, anticipate, or suggest, such electronic devices, particularly in the context of the elements of the independent claims from which these dependent claims depend.

Applicants have further amended dependent claims 10 and 28 to recite that "the detecting a first signal step is performed in response to detecting a triggering event." Support for this amendment may be found in the specification at, for example, page 6, lines 5-8. No new matter has been added by this amendment. The Applicants respectfully assert that the teachings of Kallio and the other prior art references of record, taken singly or in any combination, do not teach, anticipate, or suggest, this element, particularly in the context of the elements of the independent claims from

which these dependent claims depend.

Additionally, Applicants note that dependent claims 2-11, 19, and 26-29 depend from amended independent claims 1, 18 and 25, respectively. As discussed above, amended independent claims 1, 18 and 25 distinguish over the cited prior art. Since dependent claims include all of the limitations of the independent claims from which they depend, Applicants further assert that dependent claims 2-11, 19, and 26-29 also distinguish over the cited prior art as well. Therefore, Applicants respectfully assert that the Examiner's rejection of claims 1-11, 18, 19, 25-29 under 35 U.S.C. §102(b) as being anticipated by Kallio should be withdrawn.

The Applicants respectfully assert that the Kallio reference, taken either alone or in combination with the remaining prior art references of record, does not teach, anticipate, or suggest the claimed limitations of new dependent claims 33 and 34. The limitations of new claims 33 and 34, which recite that "the first signal is only for indicating passage through the egress portal " and that "the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal substantially transmitted to an exterior side of the egress portal," respectively, are not taught or suggested by the prior art references of record.

Rejection under 35 U.S.C. §102(b) as being anticipated by *Chaskar et al.*

The Examiner rejected claims 23 and 24 under 35 U.S.C. § 102(b) as being anticipated by *Chaskar et al.* (hereinafter "Chaskar"). The Examiner cites 35 U.S.C. § 102(b) and a proper rejection requires that a single reference teach (i.e., identically describe) each and every element of the rejected claims as being anticipated by Chaskar.[2]

The Chaskar reference teaches handover of wireless communications between

[2] See MPEP §2131 (Emphasis Added) "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim."

networks that use different wireless communications technologies. Chaskar, Abstract. The teachings of Chaskar are based upon having wireless access points that include a "border bit" and setting this "border bit" only in access points that are near possible egress points. *See*, Chaskar, FIGs. 2 and 3. When a mobile device is located within an access point with a border bit set, the handover to another technology network is performed sooner than if the border bit is not set. For example, WLAN signal level thresholds to trigger handover are set higher in access points that have their border bits set than in access points without their border bits set. Also, the WLAN signal can be allowed to drop below the set threshold for a preset period when it is operating with an access point without its border bit set. That is in contrast to operating within an access point with its border bit set, which can cause immediate handover. See, Chaskar, paragraphs 0060 and 0057-0058.

The Applicants have amended independent claim 23 in a manner similar to the amendment of independent claim 1. As discussed above for amended independent claim 1, the amended limitations of independent claim 23, i.e., "wherein the signals are associated with indicating passage through the egress portal," and "determining, in response to determining that the device has received the signals from the at least one egress portal, when to handover from one wireless communication system to the second wireless communications system," are not taught or suggested by the prior art of record. The determination of "when to handover from one wireless system" to another in the operation of the present invention is determined by receiving signals "associated with indicating passage through the egress portal" and not simply by receiving signals initiated that a user is near an egress portal and then changing to a more aggressive handover policy prior to passing through the egress portal, as is taught by Chaskar. This operation has the advantages discussed above with regards to amended independent claim 1. The Applicants therefore respectfully assert that amended independent claim 23 distinguishes over the prior art of record.

The Applicants respectfully assert that although Chaskar refers to detecting movement of a mobile device through a portal by using overlapping access points, see Chaskar, FIG. 3 and paragraphs 0080-0091, it is unclear how, or even if, the processing

described by Chaskar can detect movement of the mobile device through an access portal. The Applicants respectfully assert that if such overlapping access points are truly co-extensive, then there will be no difference in coverage and no detection of movement will be possible. If, on the other hand, there is some difference in access point coverage in the system taught by Chaskar, differences in coverage will not be limited to egress portals and receiving only one of a signal from an access point with a border bit set and an access point with a border bit not set will not be limited to only passing through an egress portal. As noted by Chaskar, "the shapes of footprints can be arbitrary due to factors such as physical obstacles (walls, metal objects), environmental conditions affecting signal propagation, movement of objects in the vicinity as well as due to intentional factors such as use of directional or sectorized antennas." Chaskar, paragraph 0045. The Applicants respectfully assert that the Chaskar reference does not enable or suggest "indicating passage through the egress portal" as is claimed by amended independent claim 23.

Dependent claim 24 depends from amended independent claim 23. As discussed above, amended independent claim 23 distinguishes over the cited prior art. Since dependent claims include all of the limitations of the independent claims from which they depend, Applicants further assert that dependent claim 24 also distinguishes over the cited prior art as well. Therefore, Applicants respectfully assert that the Examiner's rejection of claims 23 and 24 under 35 U.S.C. §102(b) as being anticipated by Chaskar should be withdrawn.

The Applicants respectfully assert that the Chaskar reference, taken either alone or in combination with the other prior art references of record, does not teach, anticipate, or suggest the claimed limitations of new dependent claims 33 and 34. The limitations of new claims 33 and 34, which recite that "the first signal is only for indicating passage through the egress portal" and that "the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal substantially transmitted to an exterior side of the egress portal," respectively, are not taught, anticipated, or suggested by the prior art references of record.

Rejection under 35 U.S.C. §103(a) as Unpatentable over *Kallio et al* in view of *Chaskar et al.*

The Examiner rejected claim 17 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Kallio in view of *Chaskar et al.* (hereinafter "Chaskar"). The Examiner recites 35 U.S.C. §103. The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole."

In the Examiner's remarks regarding this rejection, the Examiner states that "Chaskar et al. teach detecting a second wireless local area network border cell within a predetermined amount of time." Office Action dated October 18, 2004, page 9. The Applicants respectfully submit that this statement in the Office Action is the opposite of the teachings of Chaskar. The cited portion of Chaskar states:

> In case the detected border bit is equal to 0, i.e. the mobile terminal is in a non-border region of the WLAN area (see FIG. 2 or FIG. 3), the mobile terminal waits for T seconds before it initiates inter-technology handoff, in order to try to filter out spurious handoff triggers.

Chaskar, paragraph 57 (emphasis added). The next paragraph of Chaskar continues by stating:

> However, in case the detected border bit is equal to 1, i.e. the mobile terminal is in a border region of the WLAN area, the inter-technology handoff is initiated immediately, in order to try to avoid latency since the need of a handoff is a high possibility in the border region. In other words, in case the detected border bit indicates a border region, handoff is initiated aggressively."

Chaskar, paragraph 58 (emphasis added).The Applicants respectfully assert that this teaching of Chaskar is the complete opposite of the related claim limitation of claims 17 and 30 and does not render this claim limitation obvious. The applicants therefore respectfully submit that the rejection of claims 17 and 30 under 35 U.S.C. §103 over Kallio and Chaskar should be withdrawn.

The Applicants respectfully assert that the Kallio and Chaskar references, taken either alone or in combination with each other and/or with the remaining prior art of record, do not teach or suggest the claimed limitations of new dependent claims 33 and 34. The limitations of new claims 33 and 34, which recite that "the first signal is only for indicating passage through the egress portal" and that "the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal substantially transmitted to an exterior side of the egress portal," respectively, are not taught or suggested by the prior art references of record.

Rejection under 35 U.S.C. §103(a) as Unpatentable over *Kallio* in view of *Hyvarinen et al.*

The Examiner rejected claims 20-22 under 35 U.S.C. § 103(a) as being unpatentable over Kallio in view of *Hyvarinen et al.* (hereinafter "Hyvarinen"). The Examiner recites 35 U.S.C. §103. The Statute expressly requires that obviousness or non-obviousness be determined for the claimed subject matter "as a whole," and the key to proper determination of the differences between the prior art and the present invention is giving full recognition to the invention "as a whole."

With regards to amended independent claim 20, the Applicants have amended this claim to recite a limitation similar to that discussed above for amended independent claim 1. The Applicants have amended independent claim 20 to recite "a means for receiving signals from an egress portal, the signals associated with indicating passage through the egress portal." Support for this amendment may be found in the specification at, for example, page 22, line 8 through page 23, line 20. The Applicants have also amended independent claim 20 to more clearly recite that "the handover manager for determining, in response to determining that the means for receiving signals from an egress portal has received at least one signal from the egress portal, when to handover from the first wireless communication system to the second wireless communication system." Support for these amendments may be found in the specification at, for example, page 22, lines 13-20. No new matter has been added by

these amendments.

The Applicants respectfully assert that the amended limitations discussed above, which are similar to the amended limitations discussed for amended independent claim 1, are not taught or suggested by Kallio, Hyvarinen, or any of the prior art references of record, taken either singly or in any combination thereof.

The Applicants note that dependent claims 21 and 22 depend from amended independent claim 20. As discussed above, amended independent claim 20 distinguishes over the cited prior art. Since dependent claims include all of the limitations of the independent claims from which they depend, Applicants further assert that dependent claims 21 and 22 also distinguish over the cited prior art as well. Therefore, Applicants respectfully assert that the Examiner's rejection under 35 U.S.C. §103(a) over Kallio in view of Hyvarinen should be withdrawn.

The Applicants respectfully submit that the Kallio and Hyvarinen references, taken either alone or in combination with each other and/or with the remaining prior art of record, do not teach or suggest the claimed limitations of new dependent claims 33 and 34. The limitations of new claims 33 and 34, which recite that "the first signal is only for indicating passage through the egress portal" and that "the first signal comprises a wireless local area network signal substantially transmitted to an interior side of the egress portal and wherein the second signal comprises a wireless local area network signal substantially transmitted to an exterior side of the egress portal," respectively, are not taught or suggested by the prior art references of record.

CONCLUSION

The foregoing is submitted as full and complete response to the Official Action mailed October 19, 2004, and it is submitted that Claims 1-30 and 33-34, are in condition for allowance. Reconsideration of the rejection is requested. Allowance of Claims 1-30 and 33-34 is earnestly solicited.

The present application, after entry of this amendment, comprises thirty-two (32)

claims, including eight (8) independent claims. Applicants have previously paid for thirty-two (32) claims, including eight (8) independent claims. Applicants, therefore, believe that an additional fee for the claim amendments is currently not due.

If for any reason the Examiner finds the application other than in condition for allowance, or the Examiner believes that there are any informalities which can be corrected by Examiner's amendment, a telephone call to the undersigned at (561) 989-9811 is respectfully solicited.

No amendment made was related to the statutory requirements of patentablity unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless Applicants have argued herein that such amendment was made to distinguish over a particular reference or combination of references.

The Commissioner is hereby authorized to charge any fees that may be required or credit any overpayment to Deposit Account **50-1556**.

In view of the preceding discussion, it is submitted that the claims are in condition for allowance. Reconsideration, re-examination, and allowance of the claims is requested.

Respectfully submitted,

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